

Sub 2
D1
2. (Amended Once) A method of disposing waste, said method comprising the steps of:
forming a primary waste pond within an outer pond; and
establishing a stable microbiological methane fermentation zone within said primary waste pond;
wherein said forming step includes the step of forming several primary waste ponds within said outer pond.

Sub 15
D2
15. (Amended Twice) A method of disposing waste, said method comprising the steps of:
forming a primary waste pond within an outer pond; and
establishing a stable microbiological methane fermentation zone within said primary waste pond;
collecting a gas emitted from said methane fermentation zone in a submerged gas collector;
transporting said gas by way of a central mast pipe; and
collecting said gas in a gas cap.

Sub 25
D3
25. (Amended Twice) A method of disposing waste, said method comprising:
forming one or more inner ponds within an outer pond;
establishing one or more stable microbiological methane fermentation zones within said one or more inner ponds;
wherein said establishing step includes creating a stable microbiological methane fermentation zone comprising facultative heterotrophic bacteria and methane bacteria, creating a stable microbiological methane fermentation zone comprising facultative heterotrophic bacteria and methane bacteria, and
causing said facultative heterotrophic bacteria and methane bacteria to produce a gaseous emission comprising about 70% methane.

26. (Amended Twice) A method of disposing waste, said method comprising:
forming one or more inner ponds within an outer pond;

3
cont.

establishing one or more stable microbiological methane fermentation zones within
said one or more inner ponds
collecting a gas emitted from said methane fermentation zone in a submerged gas
collector;
transporting said gas by way of a central mast pipe; and
collecting said transported gas in a gas cap.

Please add the following new claims:

34. (New) A method for treating wastewater, comprising:
establishing a methane fermentation zone within a pond having a substantially
open surface, wherein said methane fermentation zone is disposed below said open surface;
and
feeding wastewater into said methane fermentation zone.

35. (New) The method of claim 34, wherein said establishing comprises
establishment of a second methane fermentation zone within said pond.

36. (New) The method of claim 34, wherein said establishing comprises
establishment of a methane fermentation zone within a pond comprising aerobic wastewater.

37. (New) The method of claim 34, further comprising generating free molecular
oxygen in said pond from growth of microalgae.

38. (New) The method of claim 34, wherein said establishing comprises
establishment of said methane fermentation zone comprising semi-solid material in a highly
reduced state to facilitate conversion to methane.

39. (New) The method of claim 34, further comprising deflecting oxygen from
said methane fermentation zone.

40. (New) The method of claim 39, wherein said deflecting comprises deflecting oxygen to reduce intrusion of dissolved oxygen from said pond into said methane fermentation zone.

41. (New) The method of claim 34, wherein said establishing comprises establishment of said methane fermentation zone comprising settleable solids, facultative heterotrophic bacteria and methane bacteria.

42. (New) The method of claim 41, wherein said establishing comprises converting at least part of said settleable solids by said facultative heterotrophic bacteria and said methane bacteria into products including a gaseous emission.

Dy
cont.
43. (New) The method of claim 41, wherein said establishing comprises converting at least part of said settleable solids by said facultative heterotrophic bacteria and said methane bacteria into products including a gaseous emission comprising about 70% or more methane.

44. (New) The method of claim 34, wherein said establishing comprises establishment of said methane fermentation zone having a top surface area no greater than approximately 0.09 hectare.

45. (New) The method of claim 44, wherein said establishing comprises establishment of a methane fermentation zone having a depth of approximately 6 to 8 meters.

46. (New) The method of claim 45, wherein said establishing comprises establishment of said methane fermentation zone within a pond, said pond having a depth of approximately 4 to 6 meters.

Sub
47. (New) The method of claim 34, wherein said methane fermentation zone comprises a bottom that is lower than a bottom of said pond.

48. (New) The method of claim 34, further comprising oxidizing gaseous hydrogen sulfide emissions from said methane fermentation zone using aerobic wastewater in said pond to form sulfates.

49. (New) The method of claim 34, wherein said wastewater flows out of said methane fermentation zone in an upward direction.

50. (New) A method of treating wastewater, comprising:
establishing methane fermentation within a fermentation pit that is covered by at least partially photosynthetically oxygenated wastewater of a pond; and
feeding wastewater into said fermentation pit.

51. (New) The method of claim 50, wherein said establishing comprises establishment of methane fermentation within said fermentation pit within said pond.

52. (New) The method of claim 50, wherein said establishing comprises establishment of methane fermentation within said fermentation pit that comprises semi-solid material in a highly reduced state to facilitate conversion to methane.

53. (New) The method of claim 50, further comprising deflecting oxygen from said fermentation pit.

54. (New) The method of claim 53, wherein said deflecting comprises deflecting oxygen to reduce intrusion of dissolved oxygen said pond into said fermentation pit.

55. (New) The method of claim 50, wherein said establishing comprises establishment of said methane fermentation zone comprising settleable solids, facultative heterotrophic bacteria and methane bacteria.

56. (New) The method of claim 55, wherein said establishing comprises converting at least part of said settleable solids by said facultative heterotrophic bacteria and said methane bacteria into products including a gaseous emission.

57. (New) The method of claim 55, wherein said establishing comprises converting at least part of said settleable solids by said facultative heterotrophic bacteria and said methane bacteria into products including a gaseous emission comprising about 70% or more methane.

58. (New) The method of claim 50, wherein said establishing comprises establishment of methane fermentation within an open pit that has a top surface area no greater than approximately 0.09 hectare.

59. (New) The method of claim 58, wherein said establishing comprises establishment of a fermentation zone having a depth of approximately 6 to 8 meters.

60. (New) The method of claim 59, wherein said establishing comprises establishment of methane fermentation within a pond that has a depth of approximately 3 to 5 meters.

61. (New) The method of claim 50, further comprising oxidizing gaseous hydrogen sulfide emissions from said methane fermentation zone to form sulfates by means of aerobic wastewater of said outer pond.

62. (New) The method of claim 50, wherein said methane fermentation zone comprises a bottom that is lower than a bottom of said pond.

63. (New) The method of claim 50, further comprising oxidizing gaseous hydrogen sulfide emissions from said methane fermentation zone using aerobic wastewater in said pond to form sulfates.

64. (New) The method of claim 50, wherein said wastewater flows out of said methane fermentation zone in an upward direction.

65. (New) A method of treating wastewater, comprising:
forming one or more inner ponds within an outer pond, said outer pond having a substantially open surface;
establishing one or more methane fermentation zones within said one or more inner ponds, wherein said one or more methane fermentation zones are disposed below said open surface; and
feeding wastewater into said one or more methane fermentation zones.

66. (New) The method of claim 65, wherein said forming comprises forming an outer pond comprising at least partially photosynthetically oxygenated wastewater.

67. (New) The method of claim 65, further comprising generating free molecular oxygen in said outer pond from growth of microalgae.

68. (New) The method of claim 65, wherein establishing comprises establishment of said one or more methane fermentation zones comprising semi-solid material in a highly reduced state to facilitate conversion to methane.

69. (New) The method of claim 65, further comprising deflecting oxygen from said one or more methane fermentation zones.

70. (New) The method of claim 65, further comprising deflecting oxygen to reduce intrusion of dissolved oxygen from said outer pond into said one or more methane fermentation zones.

71. (New) The method of claim 65, wherein said establishing comprises establishment of said one or more methane fermentation zones comprising facultative heterotrophic bacteria and methane bacteria.

72. (New) The method of claim 71, wherein said establishing comprises causing said facultative heterotrophic bacteria and methane bacteria to produce a gaseous emission.

73. (New) The method of claim 71, wherein said establishing comprises causing said facultative heterotrophic bacteria and methane bacteria to produce a gaseous emission comprising about 70% methane.

74. (New) The method of claim 65, wherein said forming comprises forming an outer pond that is about 4 to 6 meters deep.

75. (New) The method of claim 74, wherein said forming comprises forming an inner pond that is about 6 to 8 meters deep.

76. (New) The method of claim 75, wherein said forming comprises forming an inner pond that has a top surface area no greater than approximately 0.09 hectare.